ABSTRACT

The present invention provides for the preparation of 2-aryl propionic acids, which comprises the steps of : reacting an aryl compound selected from an arylalkyl halide having general formula I, aryl alcohol having general formula II or aryl substituted olefins having general formula III, as shown in the accompanying drawings, wherein, R_1 is aryl, substituted aryl, naphthyl or substituted naphthyl groups, R_2, R_3, R_4 and R_5 are independently hydrogen, alkyl, aryl, arylalkyl or cycloaliphatic groups with or without substituents and X is other a halogen atom selected from chlorine, bromine, iodine with a halide promoter, an organic acid, water and a palladium catalyst in an organic solvent selected from ketones or cyclic ethers in carbon monoxide atmosphere under homogeneous conditions, at a temperature ranging between 30 to 130°C, for a period ranging between 0.3 to 4 hrs, at pressures ranging between 50 to 1500 psig, cooling the reaction mixture to ambient temperature, flushing the reaction vessel with inert gas, removing the solvent by conventional methods, and separating the catalyst and isolating 2 aryl propionic acid having formula IV as shown in the accompanying drawings, wherein, R_1 is aryl, substituted aryl, naphthyl or substituted naphthyl groups, R_2, R_3, R_4 and R_5 are independently hydrogen, alkyl, aryl, arylalkyl, cycloaliphatic groups with or without substituents.